L9 ANSWER 9 OF 9 CAPLUS COPYRIGHT 1999 ACS DUPLICATE 7
AN 1981:546464 CAPLUS
DN 95:146464
TI **Detecting** metastases of differentiated **thyroid carcinoma** by a serum **thyroglobulin** radioimmunoassay using sensitive thyroglobulin **antibody**. Preliminary results
AU Bednar, J.; Nemec, J.; Pichova, D.; Rohling, S.; Holusova, J.
CS Res. Inst. Endocrinol., Prague, Czech.
SO Radiochem. Radioanal. Lett. (1981), 48(6), 341-53
CODEN: RRALAZ; ISSN: 0079-9483
DT Journal
LA English
AB Measurements of serum thyroglobulin were performed in patients with differentiated thyroid carcinoma during different stages of the disease and in different phases of therapy at the time of thyroglobulin detn. A modified radioimmunoassay was employed using an antibody with high specificity. Control subjects had a mean thyroglobulin level of 58.3 .mu.g/L, whereas patients with metastatic thyroid carcinomas had highly elevated levels (in some cases, >1000 .mu.g/L). The efficacy of serum thyroglobulin detns. in detecting early metastases and for evaluating therapy is discussed.
TI **Detecting** metastases of differentiated **thyroid carcinoma** by a serum **thyroglobulin** radioimmunoassay

digestions of ca hyroglobulin glycopeptides.

L12 ANSWER 25 OF 35 MEDLINE DUPLICATE 8
AN 87026736 MEDLINE
DN 87026736
TI Glycosylation of human thyroglobulin and characterization by lectin affinity electrophoresis.
AU Hanham C A; Chapman A J; Sheppard M C; Black E G; Ramsden D B
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1986 Oct 29) 884 (1) 158-65. Journal code: A0W. ISSN: 0006-3002.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198702
AB Thyroglobulin, a 660 kDa glycoprotein, is the major product of protein synthesis in the thyroid gland. It has been suggested that modifications of thyroglobulin glycosylation occur in various thyroid disorders. In order to study possible changes in glycosylation of tissue thyroglobulin associated with thyroid disease, we have developed a lectin affinity electrophoresis system which allows characterization of small (less than 1 microgram) quantities of thyroglobulin. Human thyroglobulin was extracted and purified. Agarose gels were cast containing concanavalin A, Ricinus communis agglutinin, L-phytohaemagglutinin and pokeweed mitogen at various concentrations. Purified human thyroglobulin was serially diluted, loaded onto **lectin** gels and electrophoresed. Concanavalin A, R. communis agglutinin and phytohaemagglutinin all bound **thyroglobulin** in a concentration-dependent manner. Pokeweed mitogen did not **bind** thyroglobulin. Purified thyroglobulin was treated with neuraminidase and endoglycosidase H. Two-dimensional immunoelectrophoresis revealed the migration of thyroglobulin to be modified by neuraminidase but not by endoglycosidase H. Lectin affinity electrophoresis of purified human thyroglobulin with and without enzyme treatment indicated the presence of: oligomannose structures as shown by concanavalin A reactivity and modification by endoglycosidase H, and complex oligosaccharides as shown by affinity for R. communis agglutinin and modification by neuraminidase. These structures are in keeping with the proposed patterns of glycosylation of human thyroglobulin and indicate suitability of the method for characterizing the glycosylation of small quanti

L12 ANSWER 26 OF 35 MEDLINE DUPLICATE 9
AN 84264649 MEDLINE
DN 84264649
TI Occurrence of alpha-D-galactosyl residues in the thyroglobulins from several species. Localization in the saccharide chains of the complex carbohydrate units.
AU Spiro R G; Bhoyroo V D
NC AM 17325 (NIADDK)
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1984 Aug 10) 259 (15) 9858-66. Journal code: HIV. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 198411
AB Treatment of thyroglobulins from several mammalian sources (calf, sheep, pig, dog, rat, rabbit, guinea pig, and man) with alpha-galactosidase demonstrated a species-dependent occurrence of terminal alpha-D-galactosyl residues which ranged from 11 mol/mol of protein (23% of total galactose) in calf to a complete absence in man. The presence of the alpha-D-galactosyl groups resulted in a partial **binding** of the **thyroglobulins** (greater than 70% in calf and sheep) to Bandeiraea simplicifolia I-agarose, and this **lectin**-thyroglobulin interaction could be quantitated by a solid-phase assay utilizing 125I-labeled B. simplicifolia I. Sequential glycosidase digestions of calf thyroglobulin glycopeptides containing the complex carbohydrate unit (unit B) and characterization of oligosaccharide obtained by partial acid hydrolysis indicated that the alpha-D-galactosyl residues are located on oligosaccharide branches with an alpha-D-Gal-(1----3)-beta-D-Gal-(1----4)-D-GlcNAc sequence. While mild acid treatment of calf thyroglobulin glycopeptides yielded a disaccharide, alpha-D-Gal-(1----3)-D-Gal, and a trisaccharide, alpha-D-Gal-(1----3)-beta-D-Gal-(1----4)-D-GlcNAc, which could be resolved by B. simplicifolia I-agarose or thin-layer chromatography, similar hydrolysis of the human unit B-containing glycopeptides did not produce such components. A study of various glycopeptides indicated that the alpha-D-galactosyl residues are unevenly distributed among the multiple complex carbohydrate units of calf thyroglobulin and are preferentially located in units with a relatively low sialic acid content. During affinity chromatography on B. simplicifolia I-agarose, glycopeptides with multiple alpha-D-galactosyl groups bound more firmly to the lectin than those which contained only a single residue. In contrast to the alpha-D-galactosyl residues, beta-linked galactose of calf thyroglobulin was primarily bound in penultimate locations being susceptible to enzymatic release only after prior removal of capping sialyl and alpha-D-galactosyl groups. The isolation of N-acetyllactosamine and a beta-D-Gal----beta-D-GlcNAc----D-Man trisaccharide from partial acid hydrolysates helped to position the beta-D-galactosyl residues in the oligosaccharide branches of the complex carbohydrate units.
AB . . . total galactose) in calf to a complete absence in man. The presence of the alpha-D-galactosyl groups resulted in a partial **binding** of the **thyroglobulins** (greater than 70% in calf and sheep) to Bandeiraea simplicifolia I-agarose, and this **lectin**-thyroglobulin interaction could be quantitated by a solid-phase assay utilizing 125I-labeled B. simplicifolia I. Sequential glycosidase

L12 ANSWER 28 OF 35 MEDLINE DUPLICATE 10
AN 85095005 MEDLINE
DN 85095005
TI A solid-phase radio-binding assay for the characterization of lectin recognition.
AU Lesniak A P; Liu E H
SO ANALYTICAL BIOCHEMISTRY, (1984 Oct) 142 (1) 140-7.
Journal code: 4NK. ISSN: 0003-2697.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198504
AB A rapid and quantitative method for characterizing lectin specificity is presented. This assay is analogous to solid-phase radioimmune assays and utilizes the property of irreversible binding of proteins to vinyl microtiter plates. The lectins phytohemagglutinin and concanavalin A bind to vinyl and retain their biological properties. Iodinated fetuin and immunoglobulin G are both bound by the immobilized lectins. Competing amounts of ligands presented at the same time as the iodinated glycoproteins are shown to reduce binding to the immobilized lectins. Conversely, glycoprotein ligands immobilized to vinyl retain their ability to be recognized and bind lectins. The solid-phase binding assay can be used to characterize the ligand-binding specificity of **lectins**. For example, the pattern of glycoprotein inhibition of the **binding** of iodinated gorgonian **lectin** from Leptogorgia virgulata to insolubilized **thyroglobulin** is virtually identical to the pattern reported previously using hemagglutination inhibition. The solid-phase radio-binding assay is rapid, reproducible, and sensitive to nanogram quantities of ligand added. Most importantly, it provides quantitative information on lectin recognition.
AB . . . ability to be recognized and bind lectins. The solid-phase binding assay can be used to characterize the ligand-binding specificity of **lectins**. For example, the pattern of glycoprotein inhibition of the **binding** of iodinated gorgonian **lectin** from Leptogorgia virgulata to insolubilized **thyroglobulin** is virtually identical to the pattern reported previously using hemagglutination inhibition. The solid-phase radio-binding assay is rapid, reproducible, and sensitive. . .

L12 ANSWER 35 OF 35 DGENE COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 1995P-R79121 peptide DGENE
TI Algal lectin with unique sugar-chain binding specificity - deriv.from Eucheuma or Kappaphycus species, is useful for diagnosis and therapy of cancer and immune disorders
IN Bitou N; Kawakubo A; Makino H; Ninomiya M
PA (MARI-N) MARINE GREENS LAB CO LTD
PI WO 9518149 A1 19950706 38p
AI WO 1994-JP2140 19941219
PRAI JP 1993-328218 19931224
DT Patent
LA Japanese
OS 1995-246334 [32]
AB R79121 and R79122 are possible N-terminal peptides from a new algal lectin which are derived from the Eucheuma species of alga. More specifically the lectin is derived from either E.serra, E.cottonii, E.gelatinae or E.amakusaensis. The N-terminal peptides obey the general formula G-R-Y-T-V-X-N-Q-W-G where X= Q or K. The **lectins** have a unique ability to bind specifically to certain sugar-chains, and **bind** specifically to fetuin, asialofetuin, **thyroglobulin** and yeast mannan. The **lectin** may be used in a variety of ways; as an immunomodulator, as a diagnostic and test reagent, as a specific adsorbent for separation and analysis of sugars, as an organ transplant rejection inhibitor, as an anticancer agent, for the treatment of autoimmune disease and as a lymphocyte growth factor
AB. . . either E.serra, E.cottonii, E.gelatinae or E.amakusaensis. The N-terminal peptides obey the general formula G-R-Y-T-V-X-N-Q-W-G where X=
Q or K. The **lectins** have a unique ability to bind specifically to certain sugar-chains, and **bind** specifically to fetuin, asialofetuin, **thyroglobulin** and yeast mannan. The **lectin** may be used in a variety of ways; as an immunomodulator,